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Government Policy and the Decline in U.S. Trade Competitiveness

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Introduction

This chapter examines recent developments in the U.S. competitive position from both economywide and sector-specific perspectives. At the former level, competitiveness may be measured by comparing the average of domestic prices or costs with those abroad, after allowing for changes in exchange rates; while at the disaggregated level, the price and cost comparisons are carried out with respect to sectors, industries, and products.

The two important elements determining international competitiveness are exchange rates and relative prices and costs. Since these variables are strongly influenced by macroeconomic and other government policies, shifts in those policies will alter the real exchange rate only to the extent that they affect nominal exchange rates, prices, and costs differentially. The 1980s have seen a substantial appreciation of the dollar in real terms, a significant part of that change being attributable to monetary/fiscal policies in the United States.

In addition to these more macroeconomic influences on competitiveness, gradual changes in economic structure around the globe, the spread of technology, and the emergence of new countries have brought long-run changes in comparative advantage and competitiveness, thereby mandating adjustments in the international division of labor.

Both types of change bring benefits and costs, and when the costs fall heavily on some producers while the benefits are spread more broadly among citizens, the political process may have difficulty managing the required adjustment.

Macroeconomic Influences

In a regime of fixed exchange rates, a country's competitive position deteriorates as the average of its prices and costs rises in relation to those abroad. An increase in relative prices makes selling abroad more difficult and shifts domestic expenditures away from home-produced goods toward imports. As a result, the country's share in world exports declines while import penetration rises.

When the exchange rate is flexible, it becomes an additional element determining competitiveness. The relevant unit of comparison is the real exchange rate.[1] A rise in domestic costs or prices, for example, that is not offset by a depreciation of the home currency worsens the country's competitive position; the real exchange rate appreciates, making exports more expensive to foreigners and imports cheaper to residents. A sustained real currency appreciation leads to a dete-

rioration of the trade balance, a decline in the country's share of world exports, and a rise in import penetration.

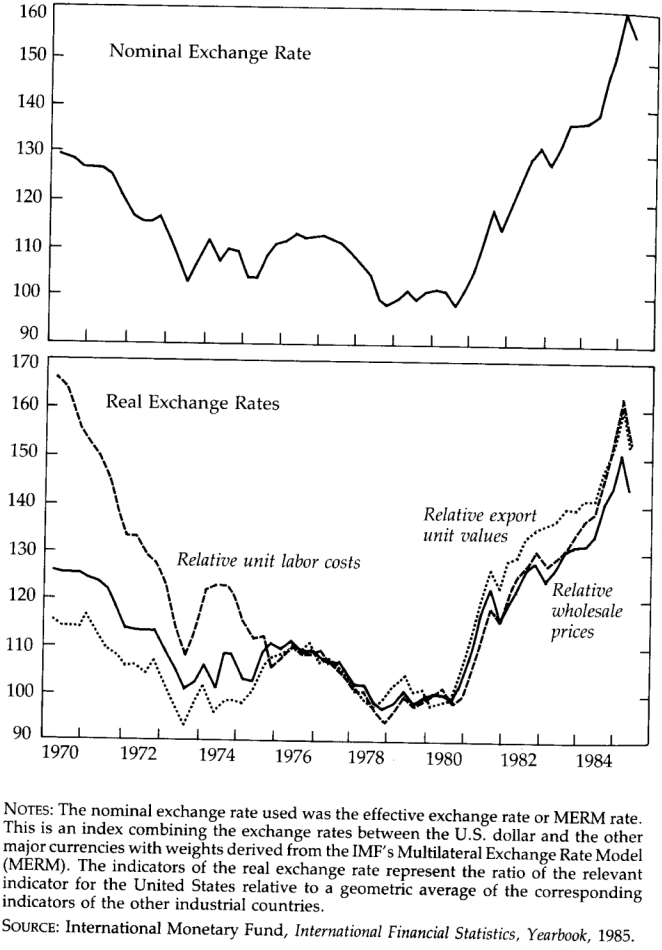
Nominal and real values of the U.S. dollar are displayed in figure 10–1. The upper panel of the figure shows the general decline in the trade-weighted value of the dollar in the 1970s and its steep appreciation in the early 1980s. The lower panel presents three measures of the real value of the dollar expressed in terms of relative wholesale prices, relative export unit values, and relative unit labor costs between the United States and a weighted average of her main trading partners. The dominant influence, especially in the later period, of the exchange rate in determining the U.S. international competitive position is clearly apparent from the similarity in the slopes of the curves in the two panels. Whatever may have been the differences between U.S. and foreign inflation rates, they have been swamped by the steep appreciation of the dollar since 1980.[2]

The recent deterioration in the U.S. competitive position was broadly based and affected U.S. trade with many countries and in many commodities. Figure 10–2 presents examples of the real exchange rate (here expressed in terms of relative hourly compensation) for several products and several trading partners. The general improvement in competitiveness in the second half of the 1970s and the sustained decline in the 1980s is evident throughout. These adverse developments involved more than the U.S. competitive position vis-à-vis Japan, a country that has been heavily criticized by Americans, and more than weak industries like textiles and steel.

In the 1970s U.S. monetary policy was expansionary, the rate of inflation soared, and the dollar depreciated in both nominal and real terms, as shown in figures 10–1 and 10–2. In 1979 the Federal Reserve inaugurated an anti-inflationary policy regime, and in 1981 the era of the large fiscal deficits began. This mixture of macroeconomic policies brought down the inflation rate and nominal interest rates while it raised real interest rates and launched the dollar on its sustained appreciation. As the demand for goods in the United States rose in relation to domestic output, the trade balance began a prolonged deterioration that led ultimately to a negative international investment position for the United States.

As table 10–1 shows, the deterioration of the trade balance occurred across a broad spectrum of products, confirming the pervasive nature of the disturbance. Even industries that had experienced substantial surpluses in the 1970s showed a deficit in the early 1980s. Much like the commodity composition, the country composition of the deterioration in the U.S. trade balance was broad, as figure 10–3 makes clear.

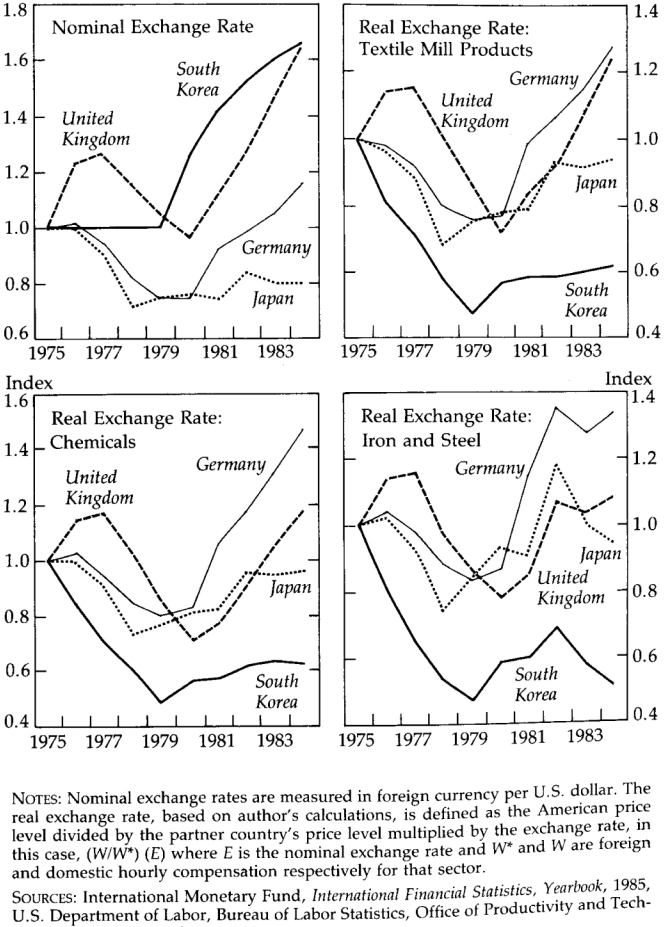
FIGURE 10–1
NOMINAL AND REAL EXCHANGE RATES, 1970–1985
(1980 = 100)



NOTES: The nominal exchange rate used was the effective exchange rate or MERM rate. This is an index combining the exchange rates between the U.S. dollar and the other major currencies with weights derived from the IMF's Multilateral Exchange Rate Model (MERM). The indicators of the real exchange rate represent the ratio of the relevant indicator for the United States relative to a geometric average of the corresponding indicators of the other industrial countries.

SOURCE: International Monetary Fund, *International Financial Statistics, Yearbook*, 1985.

FIGURE 10–2
REAL AND NOMINAL EXCHANGE RATES FOR SELECTED PRODUCTS AND COUNTRIES, 1975–1984
(1975 = 1.00)



NOTES: Nominal exchange rates are measured in foreign currency per U.S. dollar. The real exchange rate, based on author's calculations, is defined as the American price level divided by the partner country's price level multiplied by the exchange rate, in this case, (W/W^*) (E) where E is the nominal exchange rate and W^* and W are foreign and domestic hourly compensation respectively for that sector.

SOURCES: International Monetary Fund, *International Financial Statistics, Yearbook*, 1985, U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, unpublished data.

TABLE 10–1
CHANGES IN U.S. TRADE BALANCES, 1973–1984
(billions of dollars)

	1973–1981	*1981–1984*
Agricultural goods	16.3	−14.8
Capital goods	31.8	−33.5
Chemicals	8.8	−3.4
Military equipment	2.2	0.3
Consumer goods	−14.4	−4.6
Automotive products	−7.2	−21.1
Fuel	−65.0	18.4
Other industrial supplies	−7.5	−4.6

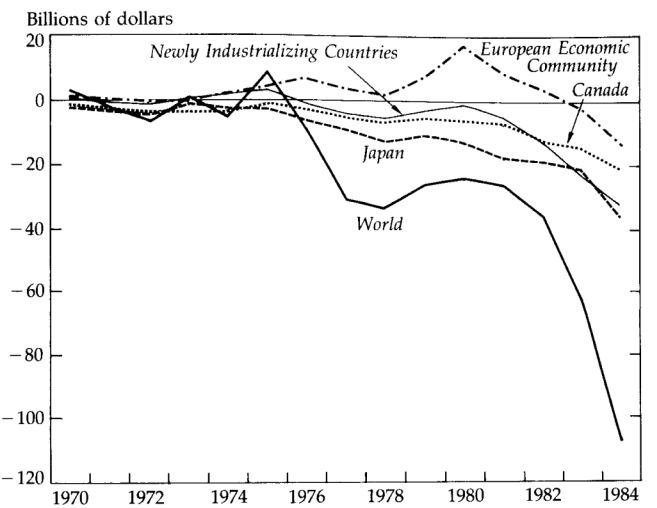
SOURCE: Department of Commerce, *Highlights of U.S. Export and Import Trade* (Washington, D.C.: Government Printing Office, 1985), pp. B–16, C–20.

The U.S. share of the exports of fifteen major industrial countries (excluding shipments to the United States) was virtually unchanged between 1981 and 1983, as was the U.S. share of high-tech exports.[3] At the same time, the share of total imports in U.S. expenditure on goods rose from approximately 12 percent in 1981 to 14 percent in 1984; during the period, import penetration rose from approximately 18 percent to more than 25 percent in capital goods and from approximately 12 percent to more than 17 percent in consumer durables (excluding autos).[4] Import penetration varied among commodities but was most pronounced in metal-cutting machine tools (from 26 percent in 1981 to 39 percent in 1984) and telephone and telegraph equipment (from 4 percent in 1981 to 14 percent in 1984).[5]

During the period of dollar appreciation, employment in U.S. manufacturing declined in spite of a substantial rise in employment in the nonagricultural part of the economy, suggesting that the positive effect on employment of the sustained economic recovery in the United States was more than offset by the negative influence of the dollar appreciation on output and employment in the tradable goods sectors.

Some politicians have made much of this decline in manufacturing employment, placing the blame on the trade deficit as the original cause rather than a symptom. The trade deficit and the lackluster performance of tradables manufacturing are the joint product of U.S. macroeconomic policies and the associated appreciation of the dollar. The relation between employment in an industry and the real exchange rate for that industry (expressed as relative bilateral hourly compensation in the United States and various key competitors) is

FIGURE 10–3
U.S. MERCHANDISE TRADE BALANCE
WITH SELECTED COUNTRIES AND REGIONS, 1970–1984



NOTES: The figures for the European Economic Community include only data for those countries that were members prior to 1985. The Newly Industrializing Countries (NICs) include Brazil, Hong Kong, Mexico, Singapore, South Korea, and Taiwan.

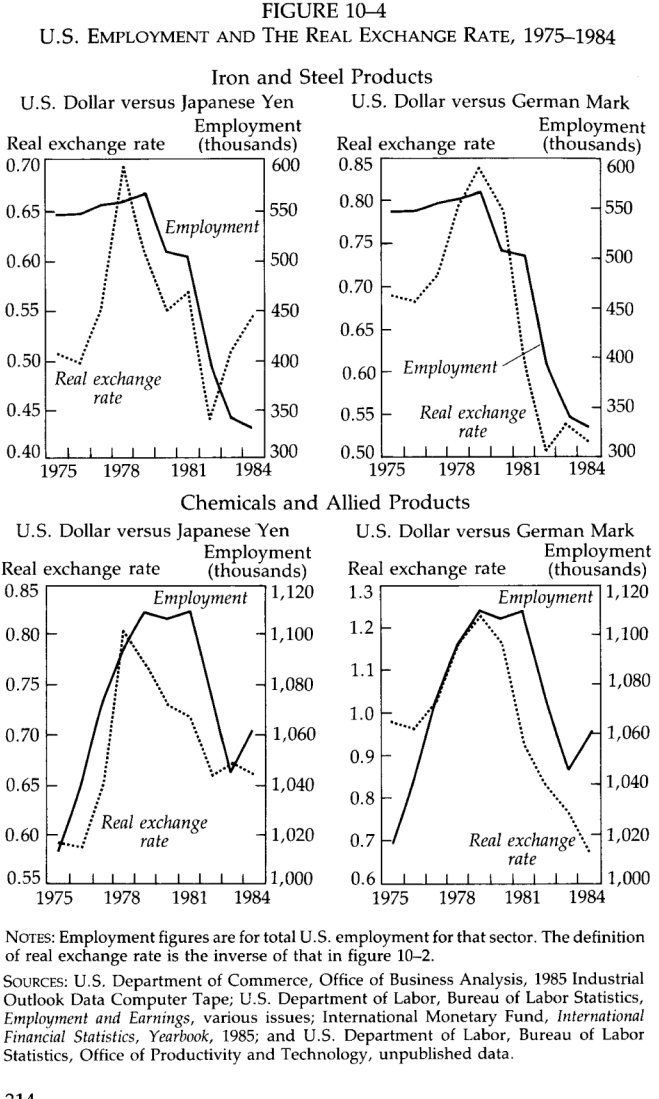
SOURCE: International Monetary Fund, *Direction of Trade Statistics, Yearbook*, 1985.

presented in figure 10–4. Thus employment in the iron and steel products industry began its steep decline in 1979 as the dollar began to appreciate in real terms against two of America's major competitors (Germany and Japan). Similarly, employment leveled off and then declined in chemicals and allied products as the exchange rate picture darkened. That pattern is repeated in other industries.[6]

The real exchange rate may be interpreted as the relative price between traded and nontraded goods, so that a real currency appreciation depresses the price of traded goods in relation to nontraded goods. This depression in turn decreases profitability in the former in relation to the latter and hence creates incentives for the redeployment of resources from the production of tradables to the production of nontradables.

If prices and wages are flexible and labor, capital, and other

FIGURE 10–4
U.S. EMPLOYMENT AND THE REAL EXCHANGE RATE, 1975–1984



NOTES: Employment figures are for total U.S. employment for that sector. The definition of real exchange rate is the inverse of that in figure 10–2.

SOURCES: U.S. Department of Commerce, Office of Business Analysis, 1985 Industrial Outlook Data Computer Tape; U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, various issues; International Monetary Fund, *International Financial Statistics, Yearbook*, 1985; and U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, unpublished data.

productive resources are mobile, the shift in the composition of output and employment required by the exchange rate change will encounter few difficulties. But if wages and prices are sticky and factories and their workers cannot be easily transferred from one use to another, then unemployment and excess capacity will be the result. That has been the situation in the United States in agriculture and manufacturing, two of the country's major tradables sectors. At the same time, the nontradables sectors, notably construction and services, have been booming.

When the tradables sector becomes depressed, it releases productive resources that must be absorbed by the nontradables sector. But if the two sectors use labor and nonlabor resources in different proportions (that is, they possess different factor intensities), then relative factor rewards must change to maintain full employment. If resources are mobile and the tradables sector is intensive in the use of capital, land, and certain kinds of labor, then land values, capital rentals, and the wages of those workers would have to fall while the wages of workers and the returns of resources used intensively in the nontradables sector rise.[7] The wage give-backs that have occurred in several tradables industries and the decline in agricultural land values are examples of such adjustment.

The economic recovery of the 1980s has been lopsided because of the dollar appreciation that has accompanied it. The growth in overall employment during the recovery may have been helped by the real appreciation as it encouraged expansion of the relatively labor-intensive nontradables sector. This raises concerns that a sustained real depreciation of the dollar will slow the growth in overall employment (and exacerbate a recession) while raising employment in the tradables sector (or reducing its rate of decline).

Secular Shifts in Competitiveness

Besides cyclical and other macroeconomic influences, long-run shifts arising from changes in tastes, from discoveries of new products and new technologies, from the appearance of new countries on world markets, and from changes in the global supply of productive resources affect the international division of labor. These long-run shifts in competitiveness are less general than exchange rate–related disturbances, and they affect particular sectors, industries, or products.

According to traditional trade theory, a country will find its competitive strength in commodities that require large inputs of resources with which it is relatively well endowed. Such products will be exported while those intensive in the country's scarce factors will be imported.

Thus the United States, with its relatively plentiful supplies of land, skilled labor, and sophisticated capital, registers comparative advantage in products heavily using these abundant factors. Such products are important exports, while products needing large inputs of cheap, low-skilled labor, for example, are imported.

It is also to be expected that a country's exports will be dominated by products using resources of which the country has a large share of the world's total supply. Since, for example, the United States lays claim to a large share of the world supply of engineers and scientists, countries in which engineers and scientists are scarce must acquire their services indirectly through imports of the goods they produce.

Of course, product differentiation, economies of scale, and externalities complicate the picture and generate much intraindustry and interindustry trade. They have also confounded empirical tests of the propositions of traditional trade theory, but by and large that theory offers a useful analytical framework.

It has long been recognized that world economic welfare is enhanced if the global division of labor is organized according to the dictates of comparative advantage. Each country, too, tends to maximize the economic welfare attainable from a given resource endowment if those resources are deployed according to the principle of comparative advantage. The idea is simply not to produce domestically something that could be imported at lower resource cost.

This idea has lately come under mounting criticism. Whereas the traditional view saw gains in a unilateral policy of free trade, gains in production due to improved efficiency, and gains in consumption due to greater consumer purchasing power, many modern critics see in unreciprocated trade a waste of national wealth.

Others object that the traditional view is static in nature and largely irrelevant in a dynamic world, that it assumes perfect competition, and that it thus has little to offer in a world of market failure and distortions. Still others assert that it ignores political realities and distributional conflicts in democratic societies.

These are weighty concerns, both analytically and operationally, but they do not invalidate the traditional wisdom; and where they justify government intervention, trade policy is rarely the appropriate instrument of intervention.[8]

Reciprocity, for example, is unquestionably desirable for its welfare benefits, but retaliatory protection against countries with closed markets generally makes matters worse. Similarly, far from invalidating the comparative advantage principle, the presence of dynamic gains enhances its power and relevance. Where markets are imperfect and subject to distortions, government intervention is justified in

principle but may be difficult to execute in practice, and the most efficient and least distorting type of intervention tends to require domestic rather than trade policies. Finally, when the political system has difficulty managing the distributional aspects of adjustment, protection is nevertheless a policy response and in general a very costly one. It is, however, preferred by politicans and their clients because it is less transparent than, say, subsidies and thus more readily undertaken without proper public debate and political discussion.[9]

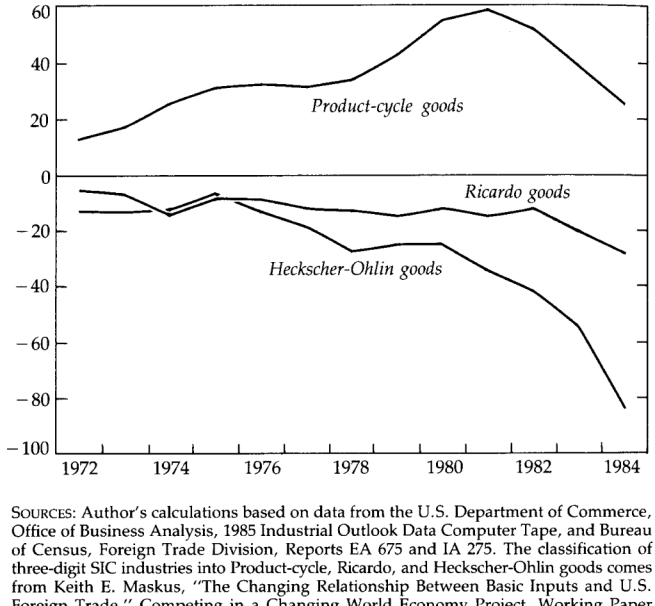
Applied to the United States, the principle of comparative advantage suggests continued competitiveness in agricultural trade and in goods that are intensive in human capital, in advanced and generally R&D-intensive technologies, and in sophisticated forms of physical capital. It is often convenient but quite misleading to think of the high-tech industry as possessing comparative advantage and traditional smoke-stack industries as doomed in the high-tech sector. In practice, there are product lines (certain semiconductors, for example) that are rapidly losing competitiveness while others in the smoke-stack area (designer apparel and industrial fibers, for example) continue to show competitive strength.

In the early years following World War II, American competitiveness could be expressed on an industrywide basis. Then, as Europe rebuilt, its trade with the United States increasingly took on an interindustry and intraindustry complexion. In this instance, history is quite probably preview: the U.S. economy is likely to become still more open with manufacturing exports and imports rising and with intraindustry trade playing an increasing role vis-à-vis not only industrial but industrializing countries.

For reasons that are strongly related to its endowment, the commodity exports of the United States have shown particular strength in agricultural and product-cycle goods, while displaying weakness in Heckscher-Ohlin goods. Figures 10–5, 10–6, and 10–7 present the performance of trade balance, value added, and employment in three broad product categories. They are Ricardo goods (intensive in the use of natural resources), Heckscher-Ohlin goods (standardized in design and production technology), and product-cycle goods (making heavy use of R&D and human capital).

The loss in competitiveness brought about by the dollar appreciation is evident in all three groups in figure 10–5 as trade balances have weakened in the 1980s. On the one hand, the trade balance in Ricardo goods has been negative and on a modest secular decline (if one abstracts from the exchange rate–related changes of the 1980s). The trade balance in product-cycle goods, on the other hand, has shown a strong and rising trend (again abstracting from the macro-

FIGURE 10–5
U.S. TRADE BALANCE FOR RICARDO GOODS, PRODUCT-CYCLE GOODS, AND HECKSCHER-OHLIN GOODS, 1972–1984



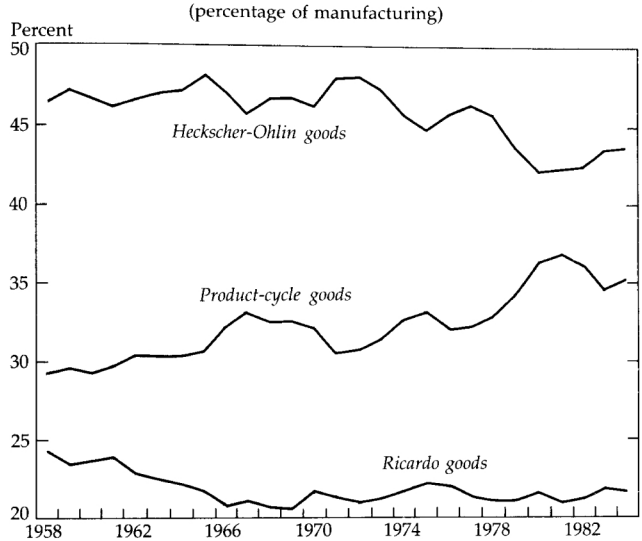
SOURCES: Author's calculations based on data from the U.S. Department of Commerce, Office of Business Analysis, 1985 Industrial Outlook Data Computer Tape, and Bureau of Census, Foreign Trade Division, Reports EA 675 and IA 275. The classification of three-digit SIC industries into Product-cycle, Ricardo, and Heckscher-Ohlin goods comes from Keith E. Maskus, "The Changing Relationship Between Basic Inputs and U.S. Foreign Trade," Competing in a Changing World Economy Project, Working Paper No. 2 (Washington, D.C.: American Enterprise Institute, August 1985).

economic distortions of the 1980s). The trade balance in Heckscher-Ohlin goods, however, has deteriorated (quite apart from the macroeconomic distortions of the 1980s).[10]

Value added in relation to total manufacturing is presented in figure 10–6, which indicates the growing importance of product-cycle goods in the U.S. economy. Ricardo goods declined in importance in the 1960s but have maintained relatively stable shares since then, while the share of Heckscher-Ohlin goods was relatively stable until the mid-1970s when it began a secular decline.

Employment shares are presented in figure 10–7. The growing importance of product-cycle goods in employing Americans and the gradually declining share of Ricardo goods are clearly apparent. Until

FIGURE 10–6
U.S. VALUE ADDED IN RICARDO GOODS, PRODUCT-CYCLE GOODS, AND HECKSCHER-OHLIN GOODS, 1958–1984
(percentage of manufacturing)

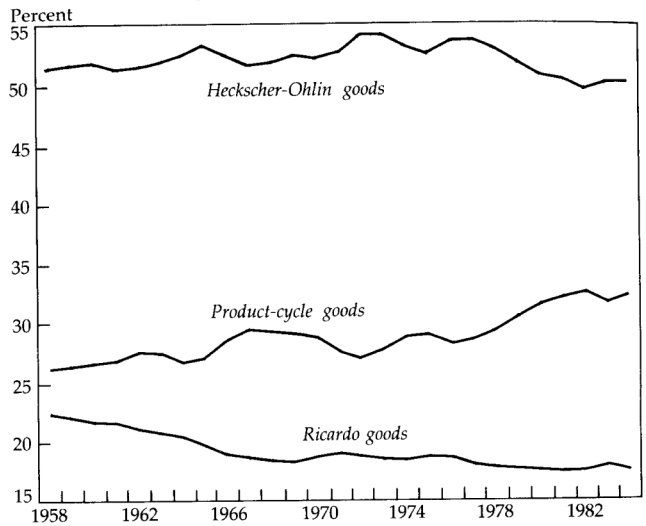


SOURCES: Author's calculations based on data from the U.S. Department of Commerce, Office of Business Analysis, 1985 Industrial Outlook Data Computer Tape, and Bureau of Economic Analysis, National Income and Wealth Division, unpublished data. See figure 10–5 for source of classification of Product-cycle, Ricardo, and Heckscher-Ohlin goods.

the mid-1970s the share of employment in Heckscher-Ohlin products was quite stable on trend, and those products continue to provide the lion's share of manufacturing employment. But in the mid-1970s the share of employment provided by Heckscher-Ohlin goods began a gradual decline.

Although the evidence must be handled with circumspection, the broad implications of the changes that have taken place are relatively unambiguous. Product-cycle goods represent strength in providing jobs and adding value in U.S. manufacturing, while Ricardo goods are gradually fading in importance. Product-cycle goods also provide strongly positive and rising trade performance. The pattern in Heckscher-Ohlin goods is more ambiguous, with the trade balance

FIGURE 10–7
U.S. TOTAL EMPLOYMENT IN RICARDO GOODS, PRODUCT-CYCLE GOODS, AND HECKSCHER-OHLIN GOODS, 1958–1984
(percentage of manufacturing)



SOURCES: Author's calculations based on data from the U.S. Department of Commerce, Office of Business Analysis, 1985 Industrial Outlook Data Computer Tape, and U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, various issues. See figure 10–5 for source of classification of Product-cycle, Ricardo, and Heckscher-Ohlin goods.

negative and deteriorating, with the share of value added declining, but with employment remaining relatively stable.

The United States is most vulnerable to foreign competition in the area of Heckscher-Ohlin goods. Many commodities—running from carbon steels to textiles and apparel—that have been the mainstay of manufacturing output and employment are found in this category. They tend to be commodities with a high degree of standardization, both in design and production technology and hence easily replicable by almost anyone. Because they are produced around the world to similar specifications with similar technologies, the competitiveness of the products of various countries is determined by relative labor cost. Japan was the first to challenge the United States and Western

Europe in Heckscher-Ohlin goods; and the newly industrializing countries are repeating that challenge in a variety of Heckscher-Ohlin goods (from textiles to carbon steels to light manufactures).

The United States must thus seek its fortunes in product-cycle goods to take advantage of plentiful supplies of scientists, engineers, and skilled workers. To accomplish this structural change, the quality of its capital and labor must be continually upgraded. This imperative is made more urgent by the increasingly aggressive R&D and human capital development under way in many countries, including the newly industrializing ones.

Indeed, the evidence suggests that the United States, though still relatively abundant in physical and human capital, is experiencing an erosion of its share of the world's capital. In many countries, capital formation has been faster than that in the United States, implying that the gap in capital abundance, though still favoring the United States, is narrowing. In his recent study, for example, Harry P. Bowen found that the growth rate of capital per worker in the United States was one of the lowest in a sample of thirty-four countries.[11] Ranked near the top were Korea, Japan, and many developing countries. As a result, Bowen estimated that the United States slipped from first place in 1963 to sixth place in 1975 in terms of capital per worker.

In a similar evaluation of the ratio of skilled labor to total labor, Bowen found the U.S. growth rate to be among the lowest, with many developing countries near the top in growth rates (not surprisingly, given the base from which they must start). As a result, the U.S. rank in terms of skilled to total labor slipped from second place in 1963 to seventh in 1975.

In some respects, these results are inevitable. As economic development spreads around the globe, it brings improvements in literacy rates and worker skills. Given the enormous differences between the U.S. base and that of most other countries, its share of the world stock of physical and human capital will gradually decline. And with that decline, its share in the world's trade of capital and skill-intensive goods will decrease.

Bowen's research indicates that, after rising in the 1960s, the capital and skill content of U.S. exports declined, especially in trade with developed countries. This finding suggests that many countries reduced their absorption of U.S. capital and skilled labor through trade (although they may have been large recipients of U.S. direct investment).

The long-run implication of capital and skill accumulation around the globe is that foreign competitors will be in the position to challenge the United States along a growing range of traded products, including

those with increasing technical sophistication and with rising value added. In addition to the semiskilled and unskilled workers who have felt the heat of foreign competitors, America's skilled workers will face foreign competitive challenges.

Does this mean, as some have suggested, that the United States will be forced to abandon the field, to leave industrial production to others, and to specialize in services? Clearly, the evidence does not support such dire predictions. It does suggest, however, that success in trade must be sought in the application of superior physical and human capital. It suggests further that the United States will lose its customary dominance across broad ranges of products and will increasingly have to seek opportunities for specialization in particular products. Intraindustry and interindustry trade, which already plays an important role in the country's trade with Europe, will increasingly dominate U.S. trade. In many industries, the United States is likely to become an importer of products with strong Heckscher-Ohlin qualities and an exporter of product-cycle goods.

Conclusion

Certain conclusions emerge from the foregoing analysis. Clearly, U.S. macroeconomic policies in the 1980s impaired the international competitive positions of U.S. producers of traded goods in manufacturing as well as in agriculture. From the perspective of U.S. trade, those policies were simply bad. The situation will not improve fundamentally if Congress, eager to blame others for our trade problems, resorts to protectionist policies that would only further hurt the U.S. position.

The United States has a long history of conducting its macroeconomic policies without regard for their external consequences. The lopsided macroeconomic policies of the 1980s that produced the steep dollar appreciation are only the latest example. In a highly competitive world economy such neglect is not benign; it will have to stop.

But improved policy making at the macroeconomic level will not address the secular challenges to American producers of tradable goods. In a market-oriented country like the United States, these challenges will require creative initiatives by the private sector, but the government can play a major role by setting the framework through its regulatory and other policies. The evidence suggests that America's competitive fortunes will depend on the quality of physical and human capital.

Notes

1. The real exchange rate is the nominal price of foreign exchange multiplied by the ratio of foreign to domestic costs or prices.

2. The three relative price lines display similar patterns in the late 1970s and early 1980s compared with the substantial dispersion of movements in the early 1970s.

3. U.S. Department of Commerce, *United States Trade: Performance in 1984 and Outlook* (Washington, D.C.: Government Printing Office, June 1985), p. 121; and AEI calculations.

4. U.S. Department of Commerce, *U.S. Manufacturing at a Crossroads* (Washington, D.C.: Government Printing Office, June 1985), p. 36; and AEI calculations.

5. Ibid., p. 38.

6. These relations need to be interpreted with caution, inasmuch as the United States passed through a prolonged recession in the early 1980s. The recession and the subsequent weak recovery in the tradables sector, however, were aggravated by the dollar's real appreciation.

7. If some factors are sector specific while others are mobile, the returns to the factors specific to the tradables sector (such as agricultural land) will collapse, and the return to other factors may fluctuate before converging on their long-run values.

8. For a detailed discussion, see Sven W. Arndt and Lawrence Bouton, *Trade Policy Brief* (Washington, D.C.: American Enterprise Institute, forthcoming).

9. For a related analysis, see Jan Tumlir, *Protectionism: Trade Policy in Democratic Societies* (Washington, D.C.: American Enterprise Institute, 1985).

10. The trade balance in agricultural products had been consistently positive and rising until the 1980s, when the fortunes of U.S. farmers were smashed by the macroeconomic distortions.

11. Harry P. Bowen, "Changes in the International Distribution of Resources and Their Impact on U.S. Comparative Advantage," *Review of Economics and Statistics*, vol. 65 (August 1983), pp. 402–414.